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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,680	08/28/2003	Hiroshi Kurihara	HITA.0428	5648

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EXAMINER

SHERMAN, STEPHEN G

ART UNIT PAPER NUMBER

2674

DATE MAILED: 01/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/649,680

Applicant(s)

KURIHARA, HIROSHI

Examiner

Stephen G. Sherman

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-2 and 8-10 is/are pending in the application.
- 4a) Of the above claim(s) 3-7 and 11-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 8-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1, 2, 8, 9 and 10, drawn to the amplifying means, classified in class 345, subclass 98.
 - II. Claim 3, 4 and 12, drawn to the gradation forming voltage, classified in class 345, subclass 690.
 - III. Claims 7 and 13, drawn to inputting a signal with larger delay, classified in class 345, subclass 99.
 - IV. Claims 14 and 15, drawn to an operation means receiving information related to brightness, classified in class 345, subclass 77.
 - V. Claims 5, 6 and 11, drawn to a scanning signal driving circuit inputting voltage signals, classified in class 345, subclass 100.

The inventions are distinct, each from the other because of the following reasons:

Invention I refers to an amplifying means to raise the performance of a pixel classified in class 345, subclass 98. Invention II refers to increasing the gradation forming voltage when a video signal is supplied to a pixel classified in class 345, subclass 690.

Invention III refers to delaying an input signal from a video signal driving circuit to a pixel

classified in class 345, subclass 99. Invention IV refers to an operation means receiving information related to a brightness inclination and outputs a correction data classified in class 345, subclass 77. Invention V refers to a scanning signal driving circuit inputting a higher voltage signal to a pixel as classified in class 345, subclass 100.

2. Inventions I, II, III, IV and V are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as a specific display element control means. Invention II has separate utility such as intensity or color driving control. Invention III has separate utility such as a particular timing circuit. Invention IV has separate utility such as brightness or intensity control. Invention V has separate utility such as particular row or column control. See MPEP § 806.05(d).

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Juan Marquez on 9 December 2005 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-2 and 8-10. Affirmation of this election must be made by applicant in replying

to this Office action. Claims 3-7 and 11-15 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Specification

5. The abstract of the disclosure is objected to because of undue length. Correction is required. See MPEP § 608.01(b).

6. The disclosure is objected to because of the following informalities:

Page 3, line 11 of the specification states: "Accordingly, there is no ways but to enlarge the area..." The examiner suggests changing the sentence to read: "Accordingly, there is no way but to enlarge the area..."

Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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8. Claims 1-2 and 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Inada et al. (EP 0 595 792 A2).

Regarding claim 1, Inada et al. disclose a display device comprising:

a plurality of scanning signal lines juxtaposed on a substrate surface (Figure 16, Y1-Ym);

a plurality of video signal lines juxtaposed transverse to the plurality of gate signal lines (Figure 16, X1-Xn);

a plurality of pixels arranged two-dimensionally on the substrate surface (Figure 16, A and B); and

a video signal driving circuit connected to respective one end sides of the plurality of video signal lines (Figure 16, item 26),

wherein the plurality of pixels includes a first pixel selected by one of the scanning signal lines and a second pixel located closer to the video signal driving circuit than the first pixel and selected by another of the scanning signal lines (Figure 16, pixel A is located closer to circuit 26 than pixel B),

each of which receives a signal from one of the plurality of video signal lines sequentially in response to respective selection thereof and indicates brightness in accordance with the signal, the signal is inputted to the one of the plurality of video signal lines through amplifying means from the video signal driving circuit, and the amplifying means raises driving performance of the first pixel higher than that of the second pixel (Figure 21 and column 17, line 52-column 18, 16. The examiner interprets

that since a smaller pulse width is applied to pixel B than is applied to pixel A in order to increase the brightness of pixel B, that this would be an amplifying means to raise the driving performance of pixel B higher than that of pixel A.).

Regarding claim 2, Inada et al. disclose a display device according to claim 1, further comprises means for adjusting the driving performance (Column 17, line 52-column 18, line 16. The examiner interprets that changing the pulse width with a delay means is a means for adjusting the driving performance.).

Regarding claim 8, Inada et al. disclose a display device according to claim 1, wherein information on a start of frame and latch pulses corresponding to every one line of the display data are inputted to the video signal driving circuit (Column 15, lines 1-26. The examiner interprets that the reset performed by the vertical sync signal is information about the start of a frame and that the horizontal sync signal HD is the latch pulse.),

the display device further comprises scanning line position measurement means counting the latch pulses according to an input of the information on the start of frame and outputting scanning line position information (Figure 18, item 54 and column 15, lines 1-26)

the scanning line position information determines whether one of the plurality of pixels is located closer to the video signal driving circuit than another of the plurality of pixels, or not (Column 15, lines 1-26. The examiner interprets that since the scanning

line position detection circuit counts up or down depending on a signal EDD, that this detects the position of the pixel on the scanning line and that since the output of the detection circuit determines the delay to be sent to the pixel that it determines the distance away from the data circuit from one pixel to another.).

Regarding claim 9, Inada et al. disclose a display device according to claim 1, further comprising a display control circuit,

wherein display data including retrace periods between every pair of line data thereof are transmitted from the display control circuit to the video signal driving circuit, the display control circuit transmits scanning line position information related to the respective line data in each of the retrace periods (Figure 18 and column 15, lines 1-26. The examiner interprets that the circuit 51 is the control circuit which outputs scanning line position information to the video signal driving circuit, and that this would be done during a period of time between data transmissions in order to detect the scanning position correctly.),

the scanning line position information determines whether one of the plurality of pixels is located closer to the video signal driving circuit than another of the plurality of pixels, or not (Column 15, lines 1-26. The examiner interprets that since the scanning line position detection circuit counts up or down depending on a signal EDD, that this detects the position of the pixel on the scanning line and that since the output of the detection circuit determines the delay to be sent to the pixel that it determines the distance away from the data circuit from one pixel to another.).

Regarding claim 10, Inada et al. disclose a display device according to claim 1, further comprising a display control circuit,

wherein the display control circuit transmits pulses to the video signal driving circuit, the display control circuit comprises means for varying widths of the pulses in accordance with scanning line position information and means for reading the scanning line position information from the widths of the pulse (Figure 18 and column 15, lines 1-26. The examiner interprets that the circuit 51 is the control circuit which transmits pulses through CLK2 to the video signal driving circuit where the control circuit delays the signal, which changes the pulse widths in accordance with the information from the scanning line position detection circuit, and since the video signal driving circuit sends these pulses to the pixels it can also read the scanning line position information from the pulse which was sent.),

the scanning line position information determines whether one of the plurality of pixels is located closer to the video signal driving circuit than another of the plurality of pixels, or not (Column 15, lines 1-26. The examiner interprets that since the scanning line position detection circuit counts up or down depending on a signal EDD, that this detects the position of the pixel on the scanning line and that since the output of the detection circuit determines the delay to be sent to the pixel that it determines the distance away from the data circuit from one pixel to another.).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Aoki (US 6,307,532) discloses setting time intervals to be longer for signals transporting delay that are sent to pixels farthest away from the Y-driver.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen G. Sherman whose telephone number is (571) 272-2941. The examiner can normally be reached on M-F, 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PATRICK N. EDOUARD
ADVISORY PATENT EXAMINER

16 December 2005